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ABSTRACT

Continuing education programmers must be risk takers; however, they should not be gamblers. The most successful of them are able to estimate a balance between potential rewards and risks, taking chances when the odds are favorable. Although it is essential that course planners balance potential financial rewards and risks, it is important to bear in mind that other nonfinancial rewards, particularly those related to reputation-related concerns, must not be forgotten. Once the programmer is ready to balance the financial rewards and risks of offering a particular course, the following factors should be considered: cost and value of programmer time, opportunity costs, sunk costs, enrollment probabilities, and up-side versus down-side potential. Each of these factors can be considered together with the others to arrive at a reward/risk index for the contemplated course, which will allow a planner to compare the course with other potential offerings. Finally, the potential risks of comtemplated courses can be shared in several ways: through shifts between fixed and variable costs, through joint decision-making efforts that allow risk to be shared between programmers and their superiors, and through a "portfolio management" approach that spreads risks among several courses rather than accounting on an individual-course basis. (MN)

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COURSE BUDGETING: BALANCING REWARDS AND RISKS

A Presentation at the AAACE National Adult Education Conference

Milwaukee, Wisconsin, November 6, 1985

by

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Good continuing education programmers are risk-takers but they are not gamblers. The most successful are able to estimate a balance between potential rewards and risks, taking chances when the odds are favorable. This estimation process usually requires that important details of the proposed course be worked out in advance through the course planning process, which should include the preparation of a course budget. In this presentation I will illustrate some techniques and define some terms and concepts which will aid you in calculating a balance between the financial rewards and risks of presenting a particular course.

But before going further, we should examine some of the non-financial rewards and risks of presenting courses because these non-financial elements are often more important, especially in organizations which are not self-supporting. A continuing education program which fails to attract enough students (however that "enough" is defined) can be damaging to reputations--the programmer's, the CE organization's, and the parent organization's. The students who enrolled and the instructors who were scheduled to teach the course are disappointed and often

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considerably inconvenienced by the cancellation of a planned educational course and they are not likely to maintain a positive attitude toward the organization in the face of more than an isolated few cancellations. On the other hand, a successful program can engender goodwill toward the organization from everyone connected with it. The programmer's personal reputation with faculty and with superiors is also likely to be influenced by the success or failure of a program. Although it is impossible to place a dollar value on these reputation-related influences, they are often more important to the course planning process than financial aspects, and, as we proceed with our discussion, we should keep in mind these influences.

The Course Planning Process

A course budget is a financial plan for a course which estimates the revenues and expenses associated with the presentation of a particular course. The course budget expresses a guess about a possible outcome in dollars, in quantities, and can serve as a basis for obtaining an estimate of the relative financial rewards and risks of presenting a course. The preparation of a course budget is an important part of the course planning process and, at the same time, is reflective of that process as it attempts to chronicle, in terms of dollar inflow and outflow, the stages of course development and presentation. Let us examine one model of the course planning process and see how course budgeting fits in.

Exhibit 1 is a Gannt chart which presents a (by no means comprehensive) listing of some stages of course development. The

bottom part of the exhibit is a graph of the cumulative costs of course development, including the cost of programmer time (which we will examine shortly). Viewed from a financial perspective, the course development process is a series of decisions to spend money. The greater the amount of expenditure, the more important the decision. In this example I have shown two common important decision points--the decision to promote and the decision to proceed. The decision to promote a course is usually the first decision in course planning that involves the major expenditure of out-of-pocket dollars, that is, expenditures for other than programmer payroll costs. The solid line on the graph shows the actual outlay of dollars, but, in effect, once the decision to promote has been made the commitment to expend money has been made and the cumulative cost line could be shown to jump up to include all expected promotion costs, expended or not. This is shown as a dotted line on the graph. Another important decision is the decision to proceed (the go, no go decision) and is usually based upon the number of enrollments in the course. Proceeding with the course, rather than cancelling it, requires significant expenditures, for instructor compensation, course materials, facility and equipment rental, and so on. Again, the cumulative cost line jumps up once the decision to proceed has been made.

With this course planning model in mind we can now examine some interrelated concepts which are important in balancing financial rewards and risks. We will cover:

the cost and value of programmer time

opportunity costs

sunk costs

enrollment probabilities

up-side and down-side potential

Reward/Risk Concepts

The Cost and Value of Programmer Time. The most important cost of course development and the most often ignored in the course budgeting process is the payroll cost of the course developer. The way a programmer spends time is crucial to the success of the enterprise and yet we have no very effective way of keeping track of it. However, we can make some calculations which are helpful in course planning.

The easiest calculation to make is the cost of programmer time. This cost is defined as the value of the consideration given up by the organization in order to secure the services of the programmer (usually salary and benefits). The "time" is defined as the number of hours that a programmer will be productively engaged in the activity of developing courses. Note that time is not the number of hours for which the programmer is paid. From the normal work year of 2080 hours we have to deduct holidays, vacation, sick leave, professional development, and other "down time". Conventionally, the cost of programmer time is usually expressed in a cost per hour calculated by dividing salary and benefits per time period (usually one year) by the number of productive hours in the time period.

The value of programmer time is the net value of the resources that the programmer can bring into the organization.

Thus, in a self-supporting CE organization, a programmer might be expected to produce a margin (surplus of revenue over expense) of $20,000 for the year. This is also usually reduced to a "value per hour" figure. Exhibit 2 illustrates these calculations.

These concepts are important not only because they are usually a relatively high proportion of total course costs but also because the evaluation of rewards and risks begins when the programmer decides how to spend working time. Even if explicit calculations are not made of the time and effort required to develop a particular course, informal calculations of the relative chances for success of various alternatives are part of the daily routine of most programmers. And this leads us to the next concept: opportunity costs.

Opportunity Costs. An opportunity cost is the net value given up by following one alternative over another. This concept is based on the tautology that if you do one thing, you can't do something else. To illustrate, suppose that a programmer was presented with the choice of developing either Course A or Course B, and that she decided to develop Course A. After spending $1,000 on development and promotion, the programmer decided to cancel Course A for lack of enrollment. If Course B could have generated a net of $500, the opportunity cost of the programmer's decision is $1,500--the $1,000 loss on the failed course and the $500 foregone by not being able to develop Course B. The problem with opportunity costs is that they usually cannot be calculated with any kind of accuracy; we only guess at the returns of actions not taken. But these guesses are frequent and the notion of opportunity cost is important in evaluating rewards and risks.

Sunk Costs. Sunk costs are costs associated with a particular project, say, the development of a continuing education course, which cannot be recovered or reduced. For instance, in Exhibit 1, at the end of the 13th week, when we have to decide whether to proceed with the course or not, all of our developmental and promotional costs (about $3,000) are sunk--we cannot recover any of them. Therefore they have no bearing on our decision to proceed. If the income we will produce by proceeding will exceed the costs of proceeding, then we should hold the course no matter how large the sunk costs.

The concept of sunk costs relates to evaluating rewards and risks because, in general, the larger the investment in sunk costs, the higher the risk. For instance, a course requiring only a $500 investment in "up-front" development and promotion is likely to be "less risky" than one requiring a $5,000 investment; that is, the consequences of failure are less severe. But this is only one side of the coin because the chances of failure must be calculated.

Enrollment Probabilities. Most programmers are very familiar with the reward/risk evaluation procedure as it pertains to enrollment estimations. In fact, there is a strong intuitive notion that most, if not all, of the reward/risk evaluation process is contained in an estimation of the probability that a particular course enrollment level will be reached. As we have seen, there are other important elements in the process which should be considered. While estimating enrollment levels is important, it is also the hardest calculation to make and

therefore subject to the greatest error. This estimation is really an art, depending largely on the intuition of the programmer and not subject to quantitative techniques. In evaluating rewards and risks, this uncertainty is a central element in the final part of the process, the estimation of up-side and down-side potential.

Up-side and Down-side Potential. Managers of investment portfolios use terms for describing possible investment outcomes. An up-side potential is the highest return an investment might make; down-side risk is the most that can be lost in an investment. Programmers can look at progrmming decisions in much the same way, seeking programs with high up-side potentials and low down-side risks, but often having to risk a lot to have a a chance at a high reward. In continuing education, high financial rewards are usually associated with high enrollments and high enrollments are often achieved only after a considerable amount has been sunk into course development and promotion. Usually, where the up-front investment is high we look for high probabilities for success. We are willing to risk a little to gain a lot even when the probability of success is small.

Reward/Risk Index

These several elements of reward/risk balancing in course planning depend to a large extent on the judgement and intuition of the programmer, but this judgement can be informed by the course budget process and by calculations derived from this process. Although course budgeting cannot do much to help the programmer estimate enrollments (or, more correctly, the

probability that a particular enrollment level will be reached), it can help him/her evaluate the appropriate proportion between reasonably estimated potential rewards and the risk of sunk costs. Exhibit 3 shows the budgets for two courses, both of which are expected to have income of $3,000, expenses of $1,700, and a margin of $1,300. However, Course A will require us to "sink" $1,300 into the course before we know how many people will enroll in it--we will spend $600 on promotion, $300 on course materials and will have to pay the instructor $400 to develop the course before it begins. Course B will require that we sink only $600 into "up-front" costs, $500 for promotion and only $100 for materials--the teacher will not be paid if the course is not held. With these facts we can create an index to help us measure the relative rewards and risks of these two courses by dividing the potential reward (margin) by the risk (sunk costs). All other things being equal (most importantly the probability that each course will indeed generate $3,000 in income), Course B with the higher ratio of 2.16 is a better bet. Note that this index is not, in itself, meaningful--it must be compared with other indexes similarly calculated to determine a relative order of alternatives.

Sharing Rewards and Risks

From the foregoing, it should be clear that there may be ways of adjusting financial elements to share rewards and risks or to minimize risks for the CE organization. One obvious way is to shift costs in or out of the "sunk" category. For instance for Course A in Exhibit 3, if we were worried that the course

might not generate enough enrollments, we might make a deal with the instructor that, instead of paying $400 for course development costs, and $400 to teach the course, we would pay $1,000, but only if the course were not cancelled. Thus we have reduced our up-side potential by $200 ($1,000 - $800) and our down-side risk by $400 (the sunk portion of the original proposal). In this way we could share both the risk and the reward of the course with the instructor.

Another way of sharing risks and rewards is to shift between fixed and variable costs. (For a definition of fixed and variable costs in continuing education, see Matkin, 1985). Exhibit 4 shows two courses, each carrying the same fee. For Alternative 1, with low variable and high fixed costs the risk of loss (at, say, 6 enrollments) and the reward for success (say, at 20 enrollments) are greater than for Alternative 2 with high variable and low fixed costs. We might, for instance, negotiate with an instructor an arrangement whereby, instead of accepting a flat fee for teaching a course, the instructor is paid on a per student basis. Thus a fixed cost becomes a variable cost and the risk of loss (as well, probably, as a greater potential return) to the organization is reduced.

Reward/risk sharing can also be accomplished between programmers and superiors. For instance, superiors may be involved in the decision to develop a very risky course with high reward potential which would otherwise be rejected by the programmer, who, without support from superiors would be assuming too great a risk. And this leads to the program planning model

which might be called "portfolio management."

Portfolio Management

Just as evaluating rewards and risks of a single course is a complex process, so too, is the process of balancing risks and rewards in a "portfolio" of courses. The organizaiton that does not allow, or even encourage, some risk taking is taking the highest risk of all--the risk of obsolescence and decline. Most programmers are faced with a wide variety of reward/risk proportions in the programs they plan and the value of diversifying that portfolio of courses is as valid a strategy in continuing education as it is in personal financial planning. The same kind of analysis as we did above for a single course can be applied to a grouping of courses.

Most continuing educators find themselves in a risky business in the sense that, unlike their colleagues in their parent institutions, they are encouraged to take risks in return for rewards and must evaluate the trade-offs involved on a routine basis. This presentation has been directed at clarifying some elements of that evaluation process.

Bibliography

For a detailed treatise on the topics covered here as well as other topics related to budgeting in continuing education, and an extensive list of further references, see Effective Budgeting in Continuing Education by Gary W. Maktin, Jossey-Bass, 1985.

EXHIBIT 1

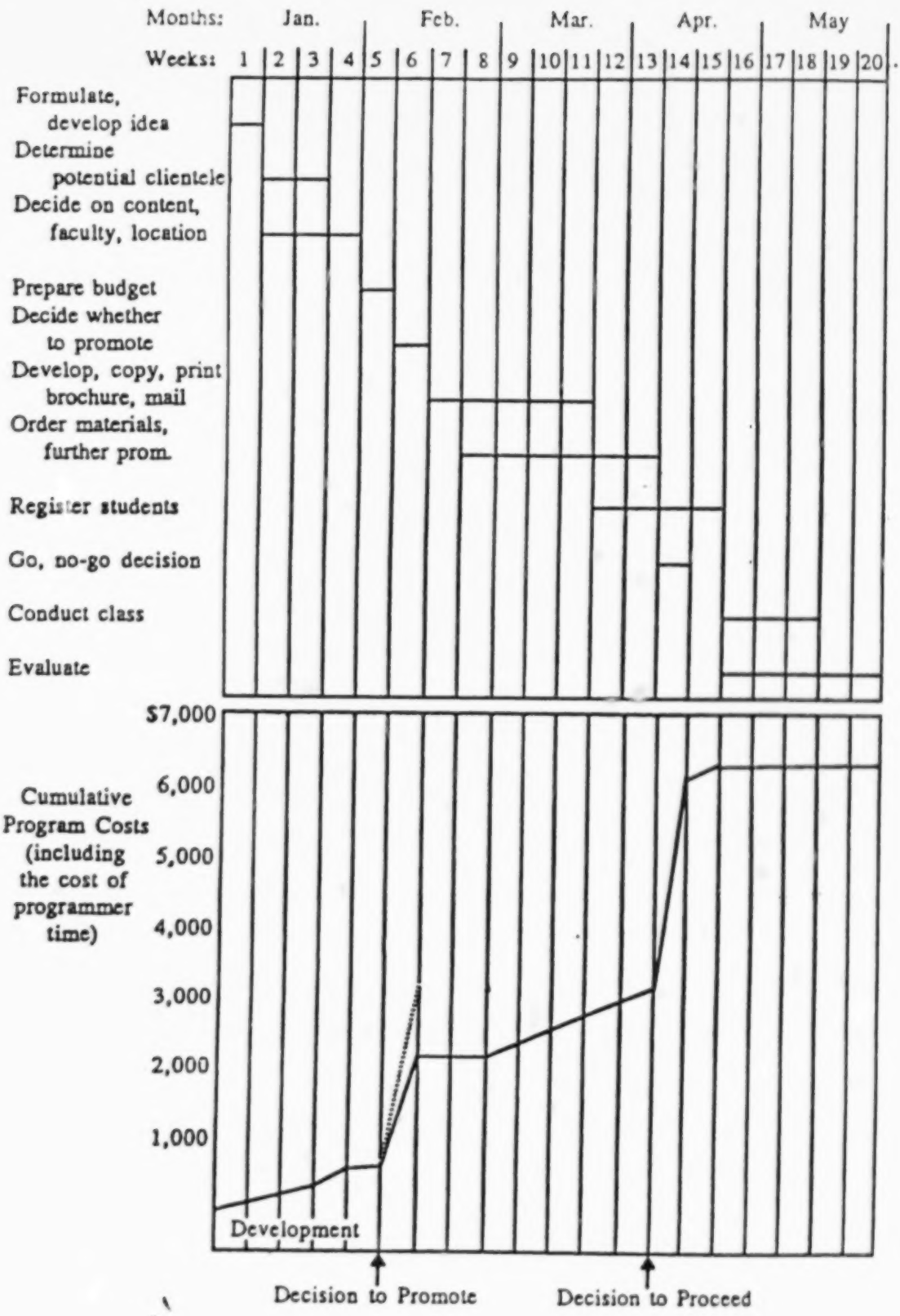

Months: Jan. Feb. Mar. Apr. May
Weeks: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Formulate, develop idea
Determine potential clientele
Decide on content, faculty, location
Prepare budget
Decide whether to promote
Develop, copy, print brochure, mail
Order materials, further prom.
Register students
Go, no-go decision
Conduct class
Evaluate
Cumulative Program Costs (including the cost of programmer time)
$7,000
6,000
5,000
4,000
3,000
2,000
1,000
Development
Decision to Promote
Decision to Proceed

EXHIBIT 2
COST AND VALUE OF PROGRAMMER TIME

"TIME"

TOTAL HOURS	2080
HOLIDAYS	(88)
VACATION	(120)
SICK LEAVE (EST)	(80)
ADMIN. MEETINGS	(98)
PROF. DEV.	(80)
PRODUCTIVE HRS.	1614

COST

$$\frac{\text{SALARY + BENEFITS}}{\text{PROD. HRS.}} = \frac{\$24000 + \$6000}{1614} = \$18.59$$

VALUE

$$\frac{\text{NET RESOURCES}}{\text{PROD. HRS}} = \frac{20,000}{1614} = 12.39$$

TOTAL $30.98

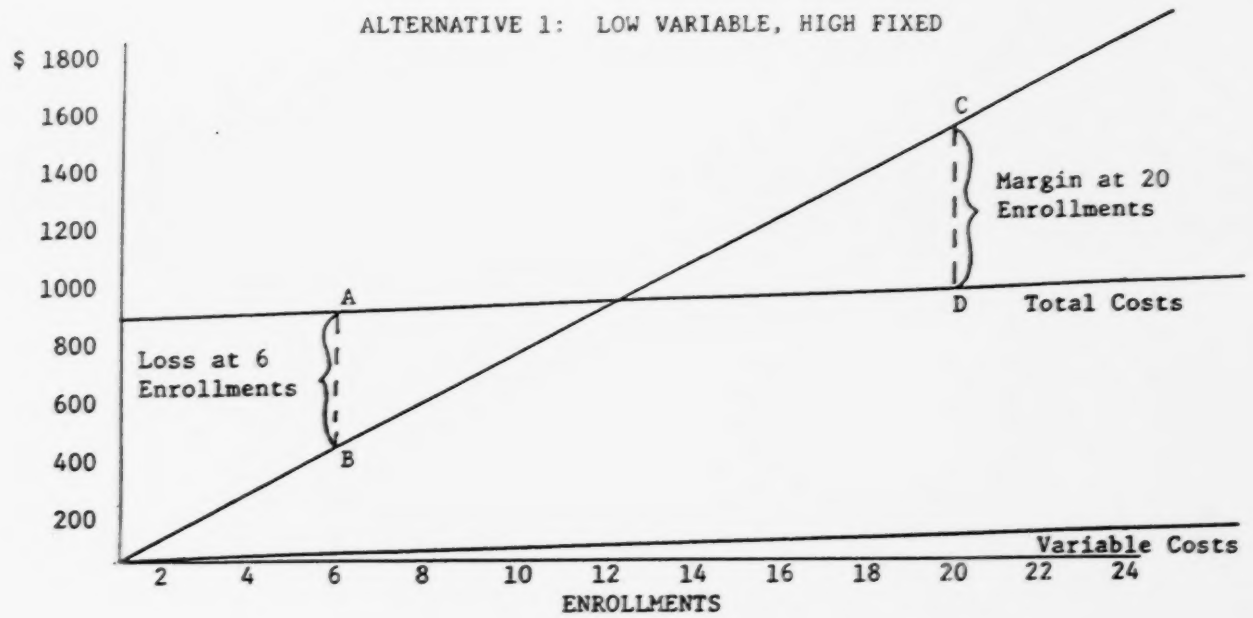
BEST COPY AVAILABLE

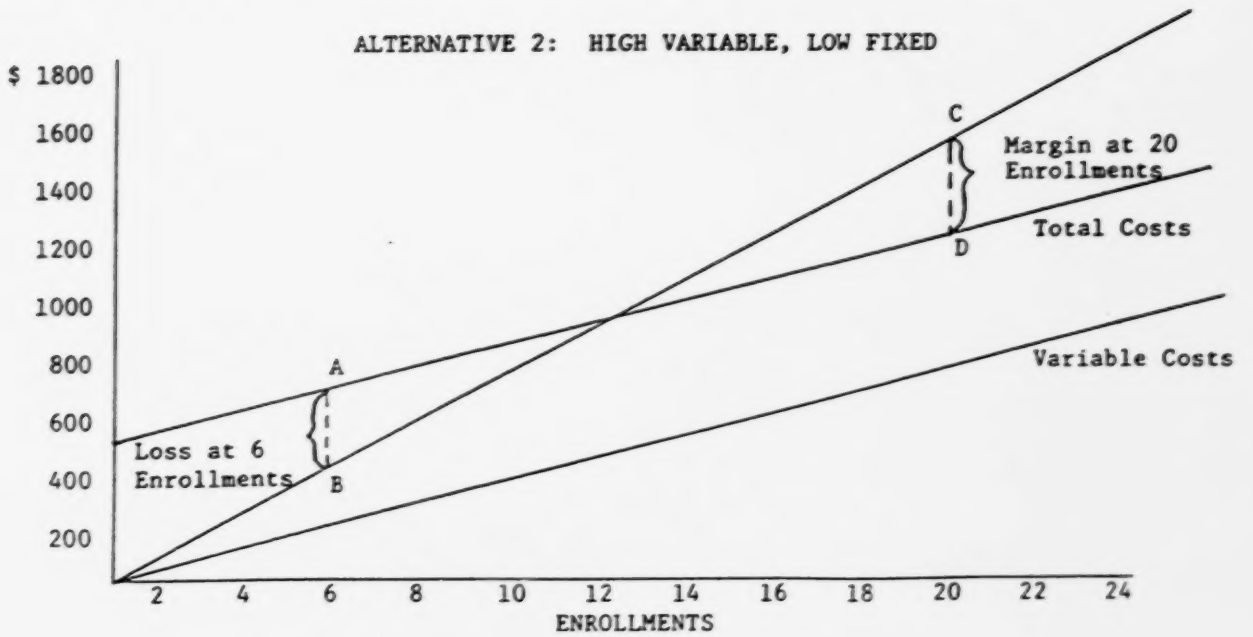
EXHIBIT # 3

RISK/REWARD INDEX

	COURSE A		COURSE B	
INCOME	$3,000		$3,000	
EXPENSE	TOTAL	SUNK	TOTAL	SUNK
PROMOTION	$600	$600	$500	$500
MATERIALS	300	300	300	100
INSTRUCTION	800	400	900	
TOTAL	1,700	$1,300	$1,700	$600
MARGIN	1,300		1300	
INDEX	$\frac{1300}{1300} = 1$		$\frac{1300}{600} = 2.16$	

EXHIBIT 4


ALTERNATIVE 1: LOW VARIABLE, HIGH FIXED
$ 1800
1600
1400
1200
1000
800
600
400
200
C
Margin at 20 Enrollments
A
D
Total Costs
Loss at 6 Enrollments
B
Variable Costs
2 4 6 8 10 12 14 16 18 20 22 24
ENROLLMENTS


ALTERNATIVE 2: HIGH VARIABLE, LOW FIXED
$ 1800
1600
1400
1200
1000
800
600
400
200
C
Margin at 20 Enrollments
D
Total Costs
A
Variable Costs
Loss at 6 Enrollments
B
2 4 6 8 10 12 14 16 18 20 22 24
ENROLLMENTS